



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/740,565	12/18/2000	Vaijayanthimala K. Anand	AUS9-2000-0592-US1	4520
35525	7590	08/10/2005	EXAMINER	
IBM CORP (YA) C/O YEE & ASSOCIATES PC P.O. BOX 802333 DALLAS, TX 75380			SIDDIQI, MOHAMMAD A	
			ART UNIT	PAPER NUMBER
			2154	

DATE MAILED: 08/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/740,565

Applicant(s)

ANAND ET AL.

Examiner

Mohammad A. Siddiqi

Art Unit

2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04/04/2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. Claims 1-26 are presented for examination.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chatwani et al. (5,729,685) (hereinafter Chatwani) in view of Wiley et al. (5,687,320) (hereinafter Wiley).
4. As per claims 1, 14, and 25, Chatwani discloses a method, apparatus and computer program product for retrieving client boot information in a network environment with multiple boot servers (col 4, lines 15-18), comprising:

initiating at a client an initial request (col 29, lines 36-44) for client configuration information (alternative embodiment, col 29, lines 55-67);

sending from the client the initial request for client configuration information to a first boot server (CMS processor is client, fig 26, col 23 lines 17-26, col 34, lines 30-57 and col 29, lines 55-67);

receiving at the client a boot server list (CMS is acting as a client, col 29) if the client configuration information is not found on the first boot server (CMS functionality is to determine correct boot code, boot server, optimal path and perform load balancing, col 30, lines 61-67 and col 32, lines 1-11); and

sending from the client a configuration information request (col 26, lines 12-16) for the client configuration (col 26, lines 12-16) information to each server (col 12, lines 5-6) in the boot server list (col 33, lines 16-54, first to next shows the order) until the client configuration information is found (col 32, lines 65-67) or a request has been sent to every server in the boot server list (fig 23(a)-24, clearly shows the CMS is identifying a boot server based on the BFQ message, col 33, lines 33-45, col 33, lines 16-54).

Chatwani may not be using the same terms as claimed, such as initiating at a client an initial request for client configuration information; the client information is not found on the first boot server, and sending a boot server

list to the client if the information is not found. However, initiating at a client an initial request for client configuration information (it is a part of initialization, in a client-server model client initiates the request and serves the request), if the client information is not found on the first boot server, and sending a boot server list to the client if the information is not found (error handling is very well known in the art, this may be default choice) are very well known in the art. Wiley, for example, discloses as initiating at a client an initial request for client configuration information (col 4, lines 51-60); the client information is not found on the first boot server (col 4, lines 6-24), and sending a boot server list to the client if the information is not found (col 4, lines 6-24). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Chatwani and Wiley. The motivation would have been to have system where client can obtain an alternate boot sever by requesting the boot server list in the case of primary boot server is affected.

5. As per claims 10, 21, and 26, are rejected for the similar reason as described in above claim 1.

6. As per claims 2, 11,15, and 22, claims are rejected for the same reasons as claim 1, above. In addition, Chatwani discloses at least one of the initial request (col 34, lines 20-23), the list request (col 34, lines 20-23),

and the configuration information request is a trivial file transfer protocol request (col 26, lines 12-16)

7. As per claims 3, 16, claims are rejected for the same reasons as claim 1, above. In addition, Chatwani discloses receiving, from the first boot server, an error message that indicates that the client information is not found on the first boot server (unavailability or other factors includes error, CMS and boot server, col 27, lines 25-29, lines col 34, lines 7-57).

8. As per claim 4, the claim is rejected for the same reasons as claim 1, above. In addition, Chatwani discloses receiving the client configuration information from an associated boot server in response to the client configuration information being found (col 34, lines 13-15, selected means associated).

9. As per claim 5, the claim is rejected for the same reasons as claim 1, above. In addition, Chatwani discloses sending a boot file request for remaining boot files to the associated boot server based on the client configuration information (col 34, lines 13-15, selected means associated).

10. As per claims 6, and 18, claims are rejected for the same reasons as claim 1, above. In addition, Chatwani discloses determining whether the: entries in the boot server list were pre-ordered (col 33, lines 16-31, first to next shows the order), in order to better support load balancing (col 26, lines 48-54) among boot servers (col 33, lines 32-41, prior to transmission to the client (col 33, lines 32-41); and

if the list is found to be ordered (col 33, lines 16-31, first to next shows the order), sending a configuration information request for the client configuration information to each server in the boot server list in the order given (col 33, lines 16-54, first to next shows the order).

11. As per claims 7 and 19, and 23, claims are rejected for the same reasons as claim 1, above. In addition, Chatwani discloses sending a configuration information request for the client configuration (fig 2, element 203, col 11, lines 15-20) information to each server in the boot server list in order of: increasing network distance (col 6, lines 15-16), where distance is estimated from available network configuration information (col 6, lines 5-16) when there was no indication that the order of the original boot server (col 12, lines 5-6) list was optimized in order to better support load balancing (col 26, lines 48-54).

12. As per claims 8 and 20, Chatwani discloses wherein the method is performed by a network bootstrap program (col 5, lines 29-45).

13. As per claim 9, the claim is rejected for the same reasons as claim 1, above. In addition, Chatwani discloses wherein the method is performed on a client computer (col 34, lines 18-20).

14. As per claim 12, Chatwani discloses adding an indication to the boot server list to inform the client that the list is being provided in optimal order to support load balancing among boot servers (load balancing is provided by the hunt group, col 26, lines 48-51 and col 6, lines 15-16).

15. As per claims 13 and 24, Chatwani discloses wherein the method is performed on a boot server (col 34, lines 34-57).

16. As per claim 17, the claim is rejected for the same reasons as claim 1, above. In addition, Chatwani discloses means for receiving the client configuration information from an associated boot server in response to the client configuration information being found (col 33, lines 16-54, first to next shows the order); and means for sending a boot file request for remaining



boot files to the associated boot server based on the client configuration information (col 34, lines 13-15, selected means associated).

***Response to Argument***

17. Applicant's arguments filed 04/04/2005 have been fully considered but they are not persuasive, therefor rejection to claims 1-26 is maintained.

18. In response to applicant's argument "Chatwani does not teach sending from a client an initial request for client configuration information to a first boot server", the examiner respectfully disagrees. Chatwani teaches sending from client an initial request for client configuration information to a first boot server (CMS is a client, 202, fig 23, col 23 lines 17-26 and col 34, lines 30-57); if the client configuration information is not found on the first boot server (concept of the hunt group is used, CMS selects the devices from the hunt group to down load the boot file and transfers to the switch, col 26, lines 54-67, col 27, lines 21-30, unavailability and alternative, col 32, lines 65-67), sending from the client a list request for a boot server list (concept of the hunt group is used for selection of the boot server, Hunt group contains the list of boot servers and CMS

may select an alternate service which includes the selection process, col 29. A list of choices are inherent in the context of selection process from the hunt group, col 26, lines 54-67, col 27, lines 20-29) to the first boot server (col 12, lines 5-6); receiving at the client the boot server list (CMS is acting as a client, col 29); and sending from the client a configuration information request (col 26, lines 12-16) for the client configuration (col 26, lines 12-16) information to each server (col 12, lines 5-6) in the boot server list (col 33, lines 16-54, first to next shows the order) until the client configuration information is found (col 32, lines 65-67) or a request has been sent to every server in the boot server list (fig 23(a)-24, clearly shows the CMS is identifying a boot server based on the BFQ message, col 33, lines 33-45, col 33, lines 16-54). Therefore, limitations are met by the reference.

19. The Examiner takes note the above Applicant's remark; however, Applicant's remark could not be imported into the claim.

20. In response to Applicant's arguments **against the references individually**, one cannot show non-obviousness by attacking references individually where the rejections are based on combinations of references.

See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In this Chatwani may not be using the same terms as claimed, such as initiating at a client an initial request for client configuration information; the client information is not found on the first boot server, and sending a boot server list to the client if the information is not found. However, initiating at a client an initial request for client configuration information (it is a part of initialization, in a client-server model client initiates the request and serves the request), if the client information is not found on the first boot server, and sending a boot server list to the client if the information is not found (error handling is very well known in the art, this may be default choice) are very well known in the art. Wiley, for example, discloses as initiating at a client an initial request for client configuration information (col 4, lines 51-60); the client information is not found on the first boot server (col 4, lines 6-24), and sending a boot server list to the client if the information is not found (col 4, lines 6-24). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of Chatwani and Wiley. The motivation would have been to have system where client can obtain an alternate boot sever by requesting the boot server list in the case of primary boot server is affected.

21. In response to Applicant's argument that "CMS is not a client", examiner respectfully disagrees. A client-server architecture, an any network-based (an interconnection of three or more communicating entities/devices that performs a specific function) software system that uses client software to request a specific service, and corresponding server software to provide the service from another computer on the network. Since Chatwani reference is based on Multi-tier client and Multi-tier client/server architecture. It would be obvious to any skilled person in the art to label CMS as a client. On the contrary, neither reference nor applicant consider CMS as a server.

### ***Conclusion***

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U.S. Patent 5,960,175 teaches a boot Server Allocation Table (SAT) means containing a listing of boot servers and an existing client load count for each boot server, a Client Allocation Table (CAT) means for associating client IP addresses with corresponding boot server IP addresses, means for prioritizing the boot servers by sorting said list in an ordered sequence of

increasing load count whenever one of the load counts is updated, and means for providing the IP addresses of the boot servers in the sequence of their listing in said SAT means for access whenever a client requests the DHCP/PXE server, wherein said SAT means is updated to increment a particular boot server load count whenever that that boot server sends an acknowledge (ACK) to a requesting client and further comprising computer readable code means configured to prioritize the boot servers by sorting said listing in an ordered sequence of increasing load count whenever one of the load counts is updated including updating said SAT to decrement the load count for a particular boot server using the association between the requesting client and boot server given in the CAT whenever the DHCP/PXE server discovers that said client is not available.

U.S. Patent 5,548,724 teaches list of processors which have been specified as potential boot servers.

U.S. Patent 5,548,724

U.S. Patent 6,601,096

U.S. Patent 6,684,327

U.S. Patent 6,871,210

U.S. Patent 5,774,660

23. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

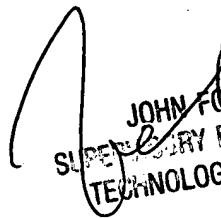
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad A. Siddiqi whose telephone number is (571) 272-3976. The examiner can normally be reached on Monday -Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A. Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MAS

  
JOHN FOLLANSBEE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100